Final
2/18/2003 11:23 AM

NMCI Garrison Training Support Plan
Deployed Support Working Group

FINAL

Version 1.0

2/17/2002

Final

2/18/2003 11:23 AM

Executive Overview. The Marine Corps requires an NMCI capability similar to the Navy's Pier-side Connectivity, for the purpose of providing connection points on Bases and Stations that will allow for tactical network training to continue. All Marine Communications elements currently use garrison networks to prepare for deployment and for training, and these NMCI connection points, referred to as "Garrison Network Portals," will continue this capability. Units must be able to continue to build tactical architectures, while in garrison, in order to provide tactical training prior to deployment, test and configure equipment prior to going into a combat zone, avoid the logistics costs associated with fully deployed tactical training exercises, and eliminate equipment and software problems prior entering the austere environments which are typical of the Marine deployment. The Garrison Network Portal, or simply Portal, provides auto-sensing Ethernet and Fast Ethernet Local Area Network (LAN) connections, with accompanying Wide Area Network (WAN) connectivity, to an exercising unit, which can range from one laptop to over a thousand network-attached deployable devices, using the full spectrum of network services. All currently available network services must be present at the Portal for the exercising unit, whether these services are provided by the Information Strike Force or by the servicing base G6. A goal of the portal concept is to maximize the benefit of "backyard exercise" training, while reducing or eliminating architectural changes to the NMCI networks which support the base. The Portal replaces an existing capability at each base and station, where the exercising unit currently enters the garrison networks through any Ethernet wall plug, in coordination with the Base G6. There will be basically two types of Portals: the ***Building Portal***, and the ***Weatherized External Portal***. It is currently envisioned that 100 – 500 portals will be necessary in order to replace the current connectivity aboard the bases and stations. Additionally, there will need to be a nodal cell, referred to as the Deployed Support Cell, in a central location aboard the base, which will be operated by the Base/Station G6 to support units who conduct training through the Portals spread throughout the base.

Technical Requirements:

1. At each Portal location, ISF will provide auto-sensing 10MBpsEthernet/100MBps Fast Ethernet, using IEEE 802.3 and IEEE 802.2 framing, from each of three, Category V-enhanced (or better), RJ-45 copper receptacles, and two multi-mode, SC-type fiber connection ports. In addition, ISF will provide one single-mode, SC-type fiber connection which provides a dedicated physical path back to the Deployed Support Cell fiber patch panel.

2. The following services will be available at the Portal location (services will be provided by the Base Deployed Support Cell in concert with ISF):

    a. DNS,
    b. TCP/IP transport with IP addresses reserved for each unit,
    c. Domain Controller Services,

d. Active Directory Services,
e. Mail Services including mail forwarding, mailbox hosting and administration, as well as X.400 connectors, Internet Mail Service connectors and other site connectors as appropriate.
f. Firewall services.
g. Routing table updates for Joint Tactical Architecture (JTA) 3.0, or newer compatible routing protocols, and necessary router/switch configurations necessary to provide internet, NIPRNET, and SIPRNET access (assuming that the using unit provides the cryptographic equipment necessary to do provide for SIPRNET connectivity.
h. Others…

3. Each Garrison environment will require approximately 5-10 portal locations per base, although this number will vary from base to base.

4. Each base G-6 will have administrative access to the Deployed Support router/switch and be able to make all configuration changes necessary to support garrison training at all portal locations.

5. ISF will provide the server and switching hardware, software, and network cabling for one Deployed Support Cell (DSC) per base, which will be manned and operated by Marines/Government Service personnel. This cell will include the current/equivalent versions of at least the following types of servers: Active Directory/Domain Controller, Global Catalog, Exchange mail, IIS, Firewall, and others… The cell will include a router/switch and necessary connectivity to support each of the base Portals and the units that attach into them. The base G6 will have administrative control over all servers in the Deployed Support Cell, and will provide additional services to the portal locations, in order to meet the training requirements of the attaching (training) unit.
6. All equipment in the Deployed Support Cell will be owned, fielded, installed, maintained, and upgraded in accordance with established ISF service support, while the G-6 will maintain operational and administrative control of the devices to support the exercising units through the Portals.
7. Approximately ten Portals will be located at each of the following bases. The exact locations, by building and room number, will be identified by the responsible G-6 or IT director for that base.

Portal Locations			
Base	**Location/Bldg**	**# Portals**	**Total Portals for Base**
MCAS, MIRAMAR	3MAW HQ/ 8402	1	
MCAS, MIRAMAR	MACG-38 HQ/7515	1	

MCAS, MIRAMAR	TACC HQ/ 9176	1	
MCAS, MIRAMAR	MAG-11 HQ/ 8477	1	
MCAS, MIRAMAR	MAG-16 HQ/ 8477	1	
MCAS, MIRAMAR	MWSG-37 S-6 / 6022	1	
MCAS, MIRAMAR	MWSS-373/ 6003	1	
MCAS, MIRAMAR	COMCABWEST S-6/ 8630	1	
MCAS, MIRAMAR	BASE CNSD / 7494	1	
MCAS, MIRAMAR	NBC BLD/E. Miramar/ 21021	1	**10**
MCAS, YUMA	MAG-13 HQ/ 505	1	
MCAS, YUMA	BASE CNSD/ 328W	1	
MCAS, YUMA	MAWTS-1/ 401	1	
MCAS, YUMA	MWSS-371/ 852	1	
MCAS, YUMA	MACS-1 / 3219	1	**5**
CAMP PENDLETON	MAG-39 HQ / 22161	1	
CAMP PENDLETON	MWSS-372 / 25264	1	
CAMP PENDLETON	MASS-3 / 32874	1	
CAMP PENDLETON	Camp Del Mar / 21415	1	
CAMP PENDLETON	CAST Bldg	1	
CAMP PENDLETON	16 Area / 1687	1	
CAMP PENDLETON	RASC / 1164	1	
CAMP PENDLETON	Las Flores / TWASC?	1	
CAMP PENDLETON	MEF MOCC /	1	
CAMP PENDLETON	14 Area/ 14125	1	
CAMP PENDLETON	22 Area/TBD	1	
CAMP PENDLETON	43 Area/TBD	1	
CAMP PENDLETON	11 area/bldg 1133	1	
CAMP PENDLETON	14 area/bldg 1413	1	
CAMP PENDLETON	15 area/bldg 1594	2	
CAMP PENDLETON	33 area/bldg 330380	2	
CAMP PENDLETON	33 area/bldg 330520	1	
CAMP PENDLETON	43 area/bldg 43321	1	
CAMP PENDLETON	43 area/bldg 330380	1	
CAMP PENDLETON	53 area/bldg 53346	1	
CAMP PENDLETON	62 area/bldg 62448	1	
CAMP PENDLETON	41 area/bldg 41350	1	
CAMP PENDLETON	41 area/bldg 41375	1	
CAMP PENDLETON	21 area/bldg 210801	1	**26**
29 PALMS (Mainside)			
	MWSS-374 / 1640	1	
29 Palms	bldg 1934	1	

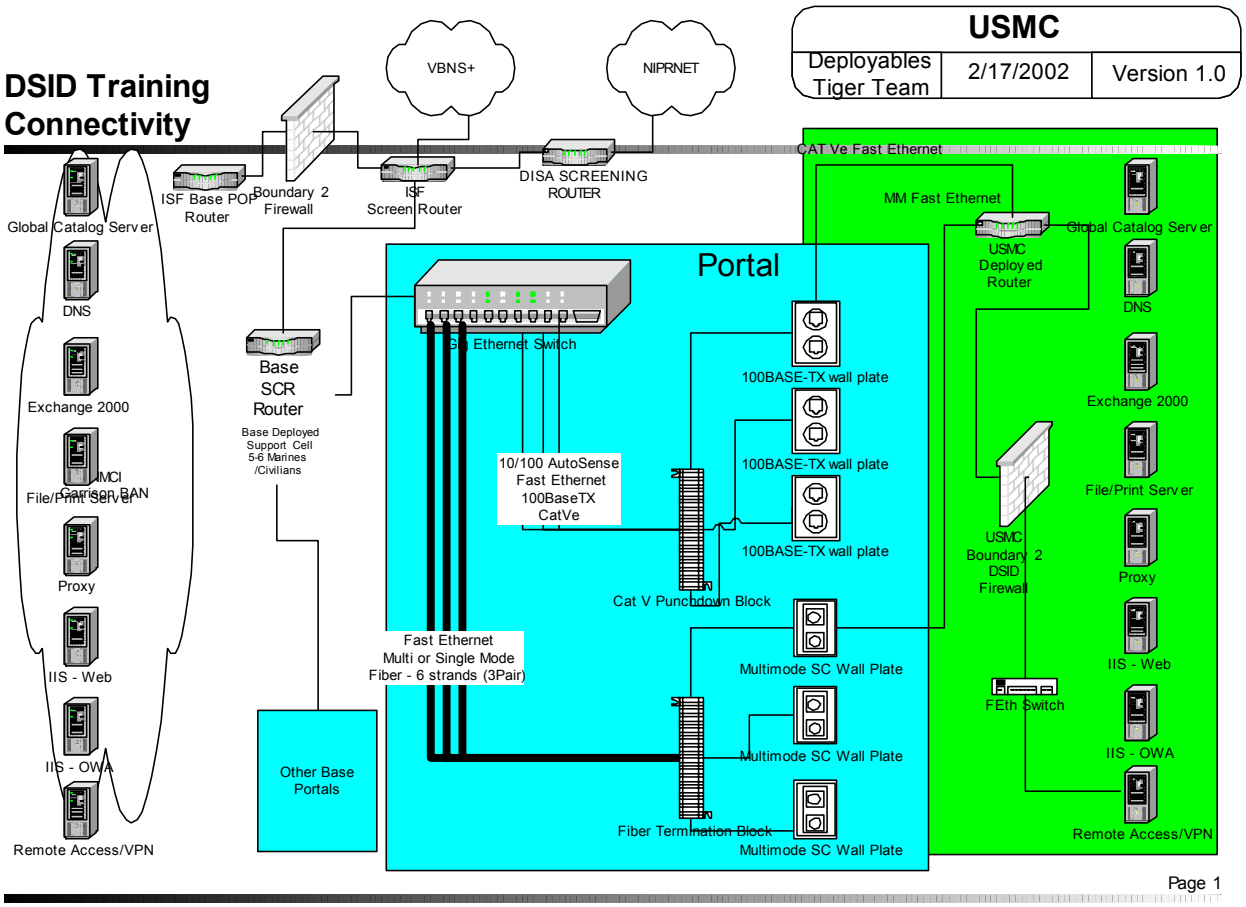
29 Palms	bldg 1419	1	
29 Palms	bldg 1302	1	
29 Palms	bldg 1317	1	
29 PALMS (Camp Wilson)	BAS / 1659	1	
	EAF/ 5701	1	**7**
Quantico	3300 MCCDC Bldg	1	
Quantico	2084 BSTF	1	
Quantico	2085 Edson Hall	1	
Quantico	1999 Telecomm Bldg	1	
Quantico	2200 Syscom Point	1	
Quantico	2117 MARS Bldg	1	
Quantico	24164 TBS Heywood Hall	1	
Quantico	3280 Marsh Center	1	
Quantico	3017 The Clubs of Quantico	1	
Quantico	2040 Research Center	1	
Quantico	2077 Geiger Hall	1	
Quantico	5001 OCS Graham Hall	1	
Quantico	3255 Newlin Hall	1	
Quantico	3250 Lejeune Hall EOC	1	**14**
Cherry Point	Fort Fisher	1	
Cherry Point	Runway 19 MCAS CP	1	
Cherry Point	Oak Grove	1	
Cherry Point	Atlantic Field	1	
Cherry Point	Bogue Field	1	
Cherry Point	MACS-2 TAOC Hill MCAS CP	1	**6**
Camp Johnson	None	0	**0**
Camp Geiger	None	0	**0**
Camp Lejeune	Nodal (2)	2	
Camp Lejeune	H-1 LWTC	1	
Camp Lejeune	CAST Training Facility	1	
Camp Lejeune	Molly Pitcher Field	1	
Camp Lejeune	Courthouse Bay	1	
Camp Lejeune	Radio Bn Building	1	
Camp Lejeune	Building 312	1	
Camp Lejeune	Bldg 1500	1	

Camp Lejeune	LZ Penguin	1	
Camp Lejeune	LZ Vulture	1	
Camp Lejeune	Stone Bay	1	**12**
Camp Courtney	4314	1	
Camp Courtney	4318	1	
Camp Courtney	4211	1	
Camp Courtney	4102	1	
Camp Courtney	4206	1	**5**
Camp Schwab	3501	1	
Camp Schwab	3320	1	
Camp Schwab	3643	1	**3**
Camp Fuji	265	1	**1**
Camp Foster	1	1	
Camp Foster	475	1	
Camp Foster	5837	1	
Camp Foster	562	1	
Camp Foster	261	1	
Camp Foster	435	1	
Camp Foster	5634	1	
Camp Foster	5692	1	**8**
Camp Kinser	114	1	
Camp Kinser	1463	1	
Camp Kinser	822	1	
Camp Kinser	823	1	
Camp Kinser	520	1	**5**
Camp Hansen	2346	1	
Camp Hansen	2205	1	
Camp Hansen	2633	1	
Camp Hansen	2634	1	
Camp Hansen	2636	1	
Camp Hansen	2809	1	
Camp Hansen	2892	1	
Camp Hansen	2893	1	**8**

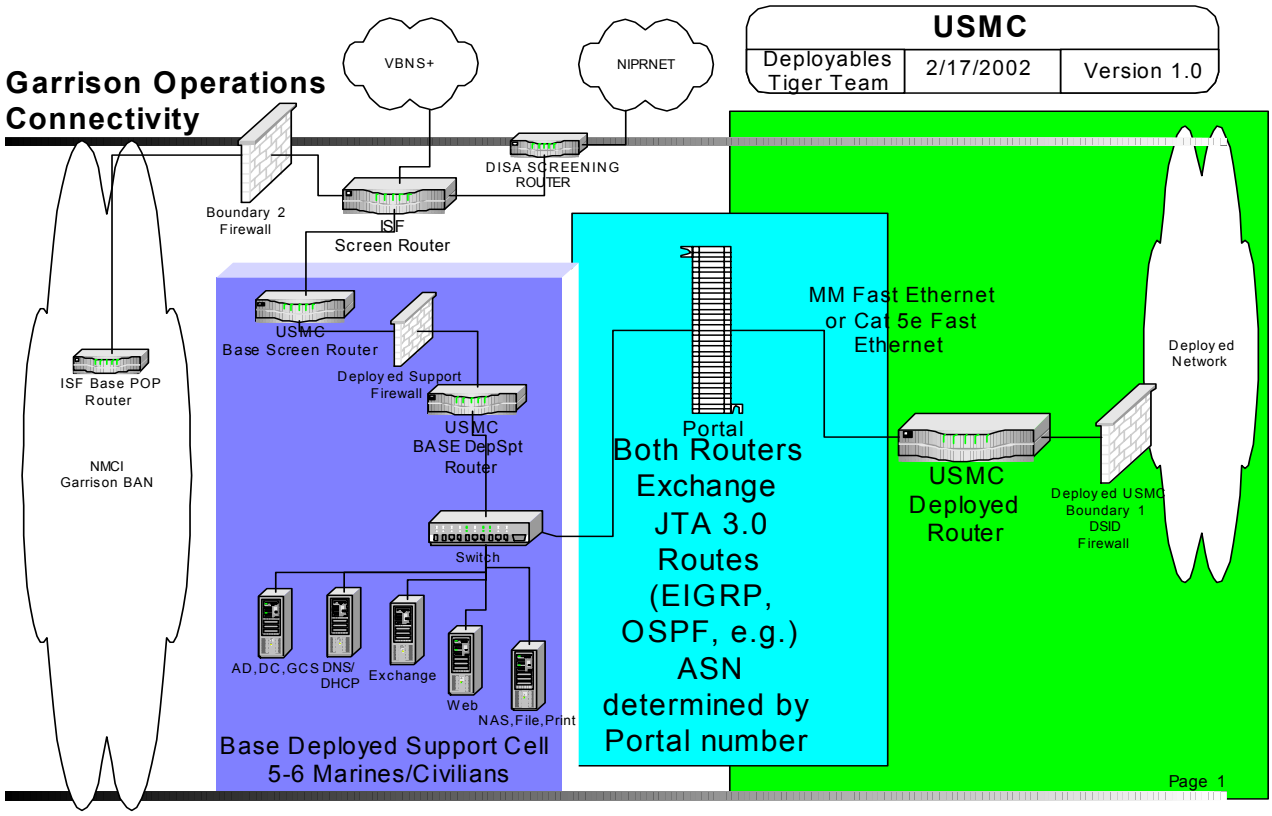
Panzer-Kaserne	MARFOREUR HQ	2	**2**
Rota, Spain	MARFOREUR DET	1	**1**
Lago-Patria	MARFOREUR DET	1	**1**
London	MARFOREUR DET	1	**1**
Dahlgren, VA	NAVSEA/C4ISR Lab	1	**1**
CSS, Panama City, FL	NAVSEA/C4ISR Lab	1	**1**
NAWC, Patuxant River, MD	NAVAIR/C4ISR Lab	1	**1**
NAWC, China Lake, CA	NAVAIR/C4ISR Lab	1	**1**
SPAWAR, San Diego, CA	SPAWAR/C4ISR Lab	1	**1**
SPAWAR, Charleston, SC	SPAWAR/C4ISR Lab	1	**1**
	Total Requirement:		**121**

8. ISF will provide a separate Portal device which is weatherized for field use, at locations to be determined by the base G6, under a separate CLIN.
9. There will be no Deployed Support Cell at bases where there is only one portal. At these locations, all services will be provided by ISF.
10. Where possible, at each portal location, the G6 will provide a dedicated T-1 connection which terminates in the base telephone switch. Extended Super Frame (ESF) framing and Binary 8, Zero Substitution (B8ZS) signaling will be the standard. This connection will be used for special circuit engineering for field exercises such as MSTP exercises.
11. At each portal location, the G6 will provide one DSN, PSTN local loop connection for use as a communications coordination link with the base telephone switch and for safety considerations.
12. The base G6 MAY also provide a switch-to-switch trunk where possible at the Portal locations.
13. Neither ISDN nor ADSL services are envisioned at the Portal Location.
14. At the Portal, one of the three fiber connections will be Single Mode fiber, and will be a dedicated path which terminates in a fiber patch panel in the Deployed Support Cell, so that one portal may be patched over to another portal via the panel at the DSC.

15. Basic Portal Architecture is depicted here:



16. The Operations of the Deployed Cell are depicted here:



Server Service Types:

1. 3270/SNA, Host on Demand
2. AD/GCS
3. Application/Maximo, Environmental Controls, etc
4. Archive/Veritas, CommVault
5. Authentication/TACACS
6. Blackberry Messaging/BES
7. Browser/NETBIOS Name
8. CD Jukebox
9. Certificate/PKI, FORTEZZA
10. Citrix Metaframe Server
11. Database/SMS, Oracle
12. Domain Name/DNS
13. Document Imaging, Scanning Archive
14. Dynamic IP Addressing/DHCP
15. Facsimile
16. File
17. Firewall
18. Global Directory/Exchange
19. Load Balancing/F5
20. Mail/Exchange
21. Messaging/DMS
22. NetBios Addressing, Browsing/WINS
23. Network Management/HP Open View
24. Operating System/Terminal Server
25. Print
26. Proxy
27. Public Folder/Exchange
28. Remote Access/RRAS
29. Routing
30. Security/BNIPS
31. Switching
32. Systems Management /SMS
33. Thin Client Support/Terminal Serve
34. Video
35. Video
36. Virus Defense/ENAV
37. Voice Over IP Manager/Call Manager
38. VPN
39. Web/IIS